

Thermal Imaging of Raised Access Floor Systems

Air Leakage Detection

Thermal Imaging is an excellent tool in nondestructive testing to find anomalies in buildings, mechanical and electrical equipment.

For Raised Access Flooring (RAF) and Underfloor Air Distribution (UFAD), thermal imaging will provide documented images showing the air leakage paths simply by creating a thermal delta between the plenum and the floor area above.

In the case of these photos the room temperature was in the low 70s. The Air Handling unit supplying air to the UFAD was placed into a full cooling mode and within just a few minutes the air leakages were found using an Infrared Camera.

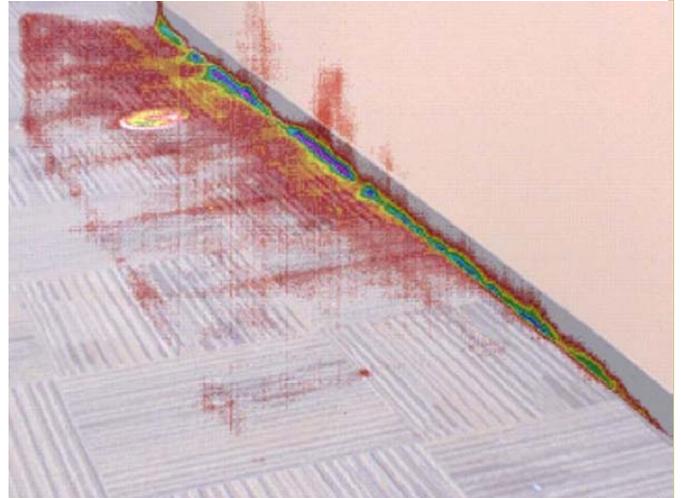


Image 1: Floor to wall joint is leaking the entire length of the UFAD system



Image 2: Floor to wall joint is leaking and there is separation of some tile joints of the UFAD system

The UFAD system utilized the raised access floor as one wall of the air distribution system, the concrete floor as the bottom and side plenum walls were installed between the floor and access floor completing the air distribution system. The RAF panels were also carpeted.

In both images the UFAD system is clearly visible as it winds throughout the space. Image 1 is showing leakage between the joint of the raised access floor system and the perimeter wall. Image 2 is showing some leakage between the raised access floor system, but also a separation of some of the tile allowing air up through the tile.

Infrared as part of GSA's PBS Guides for Raised Floor Systems

GSA's PBS Guide for Raised Floor Systems outlines the requirements for Testing, Inspection and Commissioning (Chapter 15). Adding Infrared Imaging will add to the quality assurance of the system. The images not only will help locate the areas of leakage, but provide

visual documented evidence of the leaks. Images may be used in a "before and after" scenario to document corrections.

Neudorfer Engineers is proud to be pioneering the use of Infrared Services with the requirements for

the Testing, Inspection and Commissioning of Raised Access Floor Systems as we service our customers needs throughout the United States and Internationally.